

ABSTRACT OF THE DISCLOSURE**INSERTION OF REPEATERS WITHOUT TIMING CONSTRAINTS**Inventors:

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A method/process for repeater insertion in the absence of timing constraints. Delays are optimized for multi-receiver and multi-layer nets and can be introduced in the early steps of design planning. It serves as a tool for interconnect prediction as well as planning. In the presented formulation, no restrictions are made on where the repeaters are added or what the topology of the net is. The tabulated results demonstrate improvement (speed ups) using the method/process of the present invention. The present invention runs in linear time and achieves better results than the existing dynamic programming formulation and other published heuristics. Polarity in a circuit design is corrected by traversing the circuit and carrying backwards a cost of fixing the polarity. On a subsequent traversal, buffers inserted fix the polarity.